

PROPOSED

Issuance Date

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
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13-xxxE CAB
File No. 0686-03

Mr. Lawrence G. Ornellas
Manager, Generation
Hawaiian Electric Company, Inc. (HECO)
P.O. Box 2750
Honolulu, Hawaii 96840

Dear Mr. Ornellas:

Subject: Covered Source Permit (CSP) No. 0686-01-C
Application for Renewal No. 0686-03
Hawaiian Electric Company, Inc. (HECO)
Honolulu International Airport Dispatch Standby Generators
Located at: Rodgers Boulevard, Honolulu, Hawaii
Date of Expiration: Issuance Date + 5 years

The subject Covered Source Permit is issued in accordance with Hawaii Administrative Rules, Title 11, Chapter 60.1. The issuance of this permit is based on the plans, specifications, and information that you submitted as part of your renewal application dated November 30, 2012. This permit supersedes Covered Source Permit (CSP) No. 0686-01-C issued on December 11, 2008, and amended on April 3, 2012, in its entirety. A receipt for the application filing fee of \$3,000.00 is enclosed.

The Covered Source Permit is issued subject to the conditions/requirements set forth in the following Attachments:

Attachment I:	Standard Conditions
Attachment II:	Special Conditions – Diesel Engine Generators
Attachment II – INSIG:	Special Conditions – Insignificant Activities
Attachment III:	Annual Fee Requirements
Attachment IV:	Annual Emissions Reporting Requirements

The following forms are enclosed for your use and submittal as required:

Compliance Certification Form
Monitoring/Annual Emissions Report Form: Fuel Consumption
Monitoring Report Form: Opacity Exceedances
Visible Emissions Form Requirements, State of Hawaii
Visible Emissions Form

Mr. Lawrence G. Ornellas

Issuance Date

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This permit: (a) shall not in any manner affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment; and (c) in no manner implies or suggests that the Department of Health, or its officers, agents, or employees, assumes any liability, directly or indirectly, for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment.

If you have any questions, please contact Mr. Darin Lum of the Clean Air Branch at (808) 586-4200.

Sincerely,

STUART YAMADA, P.E., CHIEF
Environmental Management Division

DL:nn

Enclosures

c: CAB Monitoring Section

**ATTACHMENT I: STANDARD CONDITIONS
COVERED SOURCE PERMIT NO. 0686-01-C**

Issuance Date:

Expiration Date:

This permit is granted in accordance with the Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control, and is subject to the following standard conditions:

1. Unless specifically identified, the terms and conditions contained in this permit are consistent with the applicable requirement, including form, on which each term or condition is based.

(Auth.: HAR §11-60.1-90)
2. This permit, or a copy thereof, shall be maintained at or near the source and shall be made available for inspection upon request. The permit shall not be willfully defaced, altered, forged, counterfeited, or falsified.

(Auth.: HAR §11-60.1-6; SIP §11-60-11)²
3. This permit is not transferable whether by operation of law or otherwise, from person to person, from place to place, or from one piece of equipment to another without the approval of the Department of Health, except as provided in HAR, Section 11-60.1-91.

(Auth.: HAR §11-60.1-7; SIP §11-60-9)²
4. A request for transfer from person to person shall be made on forms furnished by the Department of Health.

(Auth.: HAR §11-60.1-7)
5. In the event of any changes in control or ownership of the facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The permittee shall notify the succeeding owner and operator of the existence of this permit and its conditions by letter, copies of which will be forwarded to the Department of Health and the U.S. Environmental Protection Agency (EPA), Region 9.

(Auth.: HAR §11-60.1-5, §11-60.1-7, §11-60.1-94)
6. The facility covered by this permit shall be constructed and operated in accordance with the application, and any information submitted as part of the application, for the Covered Source Permit. There shall be no deviation unless additional or revised plans are submitted to and approved by the Department of Health, and the permit is amended to allow such deviation.

(Auth.: HAR §11-60.1-2, §11-60.1-4, §11-60.1-82, §11-60.1-84, §11-60.1-90)
7. This permit (a) does not release the permittee from compliance with other applicable statutes of the State of Hawaii, or with applicable local laws, regulations, or ordinances, and

(b) shall not constitute, nor be construed to be an approval of the design of the covered source.

(Auth.: HAR §11-60.1-5, §11-60.1-82)

8. The permittee shall comply with all the terms and conditions of this permit. Any permit noncompliance constitutes a violation of HAR, Chapter 11-60.1 and the Clean Air Act and is grounds for enforcement action; for permit termination, suspension, reopening, or amendment; or for denial of a permit renewal application.

(Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-19, §11-60.1-90)

9. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid.

(Auth.: HAR §11-60.1-90)

10. The permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the terms and conditions of this permit.

(Auth.: HAR §11-60.1-90)

11. This permit may be terminated, suspended, reopened, or amended for cause pursuant to HAR, Sections 11-60.1-10 and 11-60.1-98, and Hawaii Revised Statutes (HRS), Chapter 342B-27, after affording the permittee an opportunity for a hearing in accordance with HRS, Chapter 91.

(Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-90, §11-60.1-98)

12. The filing of a request by the permittee for the termination, suspension, reopening, or amendment of this permit, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(Auth.: HAR §11-60.1-90)

13. This permit does not convey any property rights of any sort, or any exclusive privilege.

(Auth.: HAR §11-60.1-90)

14. The permittee shall notify the Department of Health and U.S. EPA, Region 9, in writing of the following dates:

- a. The **anticipated date of initial start-up** for each emission unit of a new source or significant modification not more than sixty (60) days or less than thirty (30) days prior to such date;
- b. The **actual date of construction commencement** within fifteen (15) days after such date; and
- c. The **actual date of start-up** within fifteen (15) days after such date.

(Auth.: HAR §11-60.1-90)

15. The permittee shall furnish, in a timely manner, any information or records requested in writing by the Department of Health to determine whether cause exists for terminating, suspending, reopening, or amending this permit, or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Department of Health copies of records required to be kept by the permittee. For information claimed to be confidential, the Director of Health may require the permittee to furnish such records not only to the Department of Health but also directly to the U.S. EPA, Region 9, along with a claim of confidentiality.

(Auth.: HAR §11-60.1-14, §11-60.1-90)

16. The permittee shall notify the Department of Health in writing, of the **intent to shut down air pollution control equipment for necessary scheduled maintenance** at least twenty-four (24) hours prior to the planned shutdown. The submittal of this notice shall not be a defense to an enforcement action. The notice shall include the following:
 - a. Identification of the specific equipment to be taken out of service, as well as its location and permit number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of emissions of air pollutants likely to be emitted during the shutdown period;
 - d. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; and
 - e. The reasons why it would be impossible or impractical to shut down the source operation during the maintenance period.

(Auth.: HAR §11-60.1-15; SIP §11-60-16)²

17. **Except for emergencies which result in noncompliance with any technology-based emission limitation in accordance with HAR, Section 11-60.1-16.5, in the event any emission unit, air pollution control equipment, or related equipment malfunctions or breaks down in such a manner as to cause the emission of air pollutants in violation of HAR, Chapter 11-60.1 or this permit**, the permittee shall immediately notify the Department of Health of the malfunction or breakdown, unless the protection of personnel or public health or safety demands immediate attention to the malfunction or breakdown

and makes such notification infeasible. In the latter case, the notice shall be provided as soon as practicable. Within five (5) working days of this initial notification, the permittee shall also submit, in writing, the following information:

- a. Identification of each affected emission point and each emission limit exceeded;
- b. Magnitude of each excess emission;
- c. Time and duration of each excess emission;
- d. Identity of the process or control equipment causing the excess emission;
- e. Cause and nature of each excess emission;
- f. Description of the steps taken to remedy the situation, prevent a recurrence, limit the excessive emissions, and assure that the malfunction or breakdown does not interfere with the attainment and maintenance of the National Ambient Air Quality Standards and state ambient air quality standards;
- g. Documentation that the equipment or process was at all times maintained and operated in a manner consistent with good practice for minimizing emissions; and
- h. A statement that the excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

The submittal of these notices shall not be a defense to an enforcement action.

(Auth.: HAR §11-60.1-16; SIP §11-60-16)²

18. The permittee may request confidential treatment of any records in accordance with HAR, Section 11-60.1-14.

(Auth.: HAR §11-60.1-14, §11-60.1-90)

19. This permit shall become invalid with respect to the authorized construction if construction is not commenced as follows:

- a. Within eighteen (18) months after the permit takes effect, is discontinued for a period of eighteen (18) months or more, or is not completed within a reasonable time.
- b. For phased construction projects, each phase shall commence construction within eighteen (18) months of the projected and approved commencement dates in the permit. This provision shall be applicable only if the projected and approved commencement dates of each construction phase are defined in Attachment II, Special Conditions, of this permit.

(Auth.: HAR §11-60.1-9, §11-60.1-90)

20. The Department of Health may extend the time periods specified in Standard Condition No. 19 upon a satisfactory showing that an extension is justified. Requests for an extension shall be submitted in writing to the Department of Health.

(Auth.: HAR §11-60.1-9, §11-60.1-90)

21. The permittee shall submit fees in accordance with HAR, Chapter 11-60.1, Subchapter 6.

(Auth.: HAR §11-60.1-90)

22. All certifications shall be in accordance with HAR, Section 11-60.1-4.

(Auth.: HAR §11-60.1-4, HAR §11-60.1-90)

23. The permittee shall allow the Director of Health, the Regional Administrator for the U.S. EPA and/or an authorized representative, upon presentation of credentials or other documents required by law:

- a. To enter the premises where a source is located or emission-related activity is conducted, or where records must be kept under the conditions of this permit and inspect at reasonable times all facilities, equipment, including monitoring and air pollution control equipment, practices, operations, or records covered under the terms and conditions of this permit and request copies of records or copy records required by this permit; and
- b. To sample or monitor at reasonable times substances or parameters to ensure compliance with this permit or applicable requirements of HAR, Chapter 11-60.1.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

24. Within thirty (30) days of **permanent discontinuance of the construction, modification, relocation, or operation of a covered source covered by this permit**, the discontinuance shall be reported in writing to the Department of Health by a responsible official of the source.

(Auth.: HAR §11-60.1-8; SIP §11-60-10)²

25. Each permit renewal application shall be submitted to the Department of Health and the U.S. EPA, Region 9, no less than twelve (12) months and no more than eighteen (18) months prior to the permit expiration date. The Director may allow a permit renewal application to be submitted no less than six (6) months prior to the permit expiration date, if the Director determines that there is reasonable justification.

(Auth.: HAR §11-60.1-101, 40 CFR §70.5(a)(1)(iii))¹

26. The terms and conditions included in this permit, including any provision designed to limit a source's potential to emit, are federally enforceable unless such terms, conditions, or requirements are specifically designated as not federally enforceable.

(Auth.: HAR §11-60.1-93)

27. The compliance plan and compliance certification submittal requirements shall be in accordance with HAR, Sections 11-60.1-85 and 11-60.1-86. As specified in HAR, Section 11-60.1-86, the compliance certification shall be submitted to the Department of Health and the U.S. EPA, Region 9, once per year, or more frequently as set by any applicable requirement.

(Auth.: HAR §11-60.1-90)

28. **Any document (including reports) required to be submitted by this permit shall be certified as being true, accurate, and complete by a responsible official in accordance with HAR, Sections 11-60.1-1 and 11-60.1-4, and shall be mailed to the following address:**

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, HI 96814**

Upon request and as required by this permit, all correspondence to the State of Hawaii Department of Health associated with this Covered Source Permit shall have duplicate copies forwarded to:

**Chief
Permits Office, (Attention: Air-3)
Air Division
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105**

(Auth.: HAR §11-60.1-4, §11-60.1-90)

29. To determine compliance with submittal deadlines for time-sensitive documents, the postmark date of the document shall be used. If the document was hand-delivered, the date received ("stamped") at the Clean Air Branch shall be used to determine the submittal date.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

¹The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

²The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT II: SPECIAL CONDITIONS
DIESEL ENGINE GENERATORS
COVERED SOURCE PERMIT NO. 0686-01-C**

Issuance Date:

Expiration Date:

In addition to the Standard Conditions of the Covered Source Permit, the following emissions unit(s) is subject to the Special Conditions listed below:

Section A. Equipment Description

1. This permit encompasses the following equipment and related appurtenances:

Four (4) 2.5 MW Caterpillar Model 3516C-HD diesel engine generators equipped with ACERT Technology.

(Auth.: HAR §11-60.1-3)

2. An identification tag or name plate shall be displayed on each diesel engine generator to show model no., serial no., and manufacturer. The identification tag or name plate shall be permanently attached to the diesel engine generators in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

Section B. Applicable Federal Regulations

1. The diesel engine generators are subject to the provisions of the following federal regulations:
 - a. 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
 - b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines;
 - c. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards), Subpart A, General Provisions; and
 - d. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards), Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
2. The permittee shall comply with all applicable provisions of these standards, including all emission limitations and all notification, testing, monitoring, and reporting requirements. The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.1, §60.4200, §63.1, §63.6585)¹

Section C. Emission and Operational Limitations, and/or Standards

1. Fuel Limits

- a. The diesel engine generators shall be fired only on diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 with a maximum sulfur content of 0.0015% by weight and a minimum cetane index of forty (40) or a maximum aromatic content of thirty five (35) volume percent.
- b. The total combined fuel consumption of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 for the four (4) diesel engine generators shall not exceed 1,562,276 gallons per any rolling twelve-month (12-month) period.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, 40 CFR §60.4207, §63.6590)¹

2. For any six (6) minute averaging period, the diesel engine generators shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during start-up, shut-down, or equipment breakdown, the diesel engine generators may exhibit visible emissions not greater than sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90)

3. The diesel engine generators shall be properly maintained and kept in good operating condition at all times with scheduled inspections and maintenance as recommended by the manufacturer or as needed.

(Auth.: HAR §11-60.1-3, §11-60.1-90, 40 CFR §60.4211)¹

4. Alternate Operating Scenario

- a. The permittee may replace the diesel engine generator(s) with a temporary replacement unit if any repair reasonably warrants the removal of the diesel engine generator from its site (i.e., equipment failure, engine overhaul, or any major equipment problems requiring maintenance for efficient operation) and the following provisions are adhered to:
 - i. Notification and approval in accordance with Attachment II, Special Condition No. E.6.a;
 - ii. The temporary replacement unit is similar in size with equal or lesser emissions;
 - iii. The temporary replacement unit complies with all applicable conditions including all air pollution control equipment requirements, operating restrictions, and emission limits;
 - iv. The installation/operation of the temporary replacement unit shall not exceed twelve (12) consecutive months;
 - v. The diesel engine generator shall be repaired and returned to service at the same location in a timely manner; and

vi. Removal and return information is submitted as required by Attachment II, Special Condition No. E.6.b.

- b. The Department of Health may require an ambient air quality assessment of the temporary unit, and/or provide a conditional approval to impose additional monitoring, testing, recordkeeping, and reporting requirements to ensure the temporary unit is in compliance with the applicable requirements of the permitted unit being temporarily replaced;
- c. Alternate Fuels. The permittee may fire the diesel engine generators on an alternate fuel provided all conditions of the Covered Source Permit are complied with including compliance with the NAAQS/SAAQS and with prior written approval from the Department of Health;
- d. Records shall be maintained in accordance with Attachment II, Special Condition No. D.4; and
- e. The terms and conditions under each operating scenario shall meet all applicable requirements, including special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-68, §11-60.1-90)

5. The permittee shall not discharge or cause the discharge into the atmosphere from the diesel engine generators in excess of the following emission rates:

<u>Pollutant</u>	<u>Emission Limit (3-hr Avg.)</u>
Nitrogen Oxides (NO _x)	54.8 lb/hr

The Department of Health may lower the allowable emission limitation for NO_x after reviewing the initial performance test results required under Attachment II, Special Conditions, Section F.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

6. The exhaust stacks for the four (4) diesel engine generators shall each be increased to a total stack height of 87.5 feet.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

Section D. Monitoring and Recordkeeping Requirements

1. Non-resetting volumetric fuel flow meter(s) shall be installed, operated, and maintained in good operating condition for the permanent recording of the total gallons of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 fired in the four (4) diesel engine generators. The non-resetting meter shall not allow the manual resetting or other manual adjustment of the meter readings. The installation of any new non-resetting meter or the replacement of any existing non-resetting meter shall be designed to accommodate

a minimum of five (5) years of equipment operation, considering any operational limitations, before the meter returns to a zero reading.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. The permittee shall maintain records on the following items:

- a. Fuel consumption. Records for the non-resetting volumetric fuel flow meter(s) shall include:
 - i. Date of meter readings;
 - ii. Beginning and ending meter readings for each month; and
 - iii. The total gallons of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 fired in the four (4) diesel engine generators on a monthly and rolling twelve-month (12-month) basis;
- b. Fuel delivery receipts showing the fuel type, sulfur content (percent by weight), cetane index or aromatic content (volume percent), date of delivery, and gallons of fuel delivered to the site for the diesel engine generators shall be maintained. Fuel sulfur content, cetane index, and aromatic content may be demonstrated by providing the supplier's fuel specification sheet for the type of fuel purchased and received;
- c. Records on inspections, maintenance, and any repair work conducted on the diesel engine generators. At a minimum, these records shall include: the date of the inspection/work, name and title of personnel performing inspection/work, a short description of the action and/or any such repair work, and a description of the part(s) inspected or repaired; and
- d. Records of any alternate operating scenarios as required by Attachment II, Special Condition No. D.4.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR §60.4214)¹

3. Visible Emissions (VE)

The permittee shall conduct **monthly** (calendar month) VE observations for each diesel engine generator by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9, or U.S. EPA approved equivalent methods, or alternate methods with prior written approval from the Department of Health. For each month, two (2) consecutive six (6) minute observations shall be taken at fifteen (15) second intervals. Records shall be completed and maintained in accordance with the **Visible Emissions Form Requirements**.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90)

4. Alternate Operating Scenario

The permittee shall contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility, the scenario under which it is operating.

(Auth.: HAR §11-60.1-3, §11-60.1-68, §11-60.1-90)

5. All records, including support information, shall be true, accurate, and maintained for at least **five (5) years** from the date of any required monitoring, recordkeeping, testing, or reporting. Support information includes all maintenance, inspection, and repair records and copies of all reports required by this permit. These records shall be in a permanent form suitable for inspection and made available to the Department of Health or their representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

Section E. Notification and Reporting Requirements

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 14, 17, and 24, respectively:

- a. *Anticipated date of initial start-up, actual date of construction commencement, and actual date of start-up;*
- b. *Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and*
- c. *Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.*

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

2. The permittee shall report within **five (5) working days** any deviations from permit requirements, including those attributable to upset conditions, the probable cause of such deviations and any corrective actions or preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. Monitoring Reports

The permittee shall submit **semi-annually** the following written report to the Department of Health for monitoring purposes. The report shall be submitted within **sixty (60) days** after the end of each semi-annual calendar period (January 1 to June 30 and July 1 to December 31) and shall include the following:

- a. The total combined fuel consumption (gallons) of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 for the four (4) diesel engine generators on a monthly and rolling twelve-month (12-month) basis. Also the type of fuel fired, maximum sulfur content (percent by weight), minimum cetane index and maximum aromatic content (volume percent). The enclosed **Monitoring/Annual Emissions Report Form: Fuel Consumption**, shall be used for reporting.
- b. Any opacity exceedances as determined by the required VE monitoring. Each exceedance reported shall include the date, six (6) minute average opacity reading, possible reason for exceedance, duration of exceedance, and corrective actions taken. If there are no exceedances, the permittee shall submit in writing a statement indicating that for each equipment there were no exceedances for that semi-annual period.

The enclosed **Monitoring Report Form: Opacity Exceedances** shall be used.

- c. Any deviations from permit requirements shall be clearly identified.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90)

4. Annual Emissions Reports

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit on an **annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days after the end of each calendar year**. The enclosed **Monitoring/Annual Emissions Report Form: Fuel Consumption**, shall be used in reporting.

Upon the written request of the permittee, the deadline for reporting annual emissions may be extended if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-114)

5. Compliance Certification Form

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached **Compliance Certification Form** pursuant to HAR, Section 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

- a. The identification of each term or condition of the permit that is the basis of the certification;
- b. The compliance status;
- c. Whether compliance was continuous or intermittent;

- d. The methods used for determining the compliance status of the source currently and over the reporting period;
- e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504(b) of the Clean Air Act;
- f. Brief description of any deviations including identifying as possible exceptions to compliance any periods during which compliance is required and in which the excursion or exceedances as defined in 40 CFR 64 occurred; and
- g. Any additional information as required by the Department of Health including information to determine compliance.

The compliance certification shall be submitted **within sixty (60) days** after the end of each calendar year, and shall be signed and dated by a responsible official.

Upon written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

6. Alternate Operating Scenario

- a. Within **thirty (30) days** of commencement of the temporary replacement, the permittee shall submit a written request and receive prior written approval from the Department of Health before the exchange. The written request shall identify at a minimum the reasons for the replacement of the diesel engine generator from the site of operation and the estimated time period/dates for the temporary replacement, type and size of the temporary unit, emissions data, and stack parameters;
- b. Prior to the removal and return of the diesel engine generator, the permittee shall submit to the Department of Health written documentation on the removal and return dates and on the make, size, model, and serial numbers for both the temporary replacement unit and the installed unit; and
- c. Alternate Fuels. In requesting for approval to fire alternate fuels, the permittee shall at a minimum, provide the Department of Health with information on the type of fuel proposed, reason for using the alternate fuel, and emissions data. The Department of Health may require an ambient air quality impact assessment for firing the alternate fuel and/or provide a conditional approval to impose additional monitoring, testing, recordkeeping, and reporting requirements.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

Section F. Testing Requirements

1. Initial and Subsequent Performance Tests

The permittee shall conduct or cause to be conducted initial performance tests within **one (1) year** of startup and subsequent performance tests every **8,760 hours** of operation or **three (3) years**, whichever comes first, on the diesel engine generators for NO_x, CO, PM/PM₁₀, and VOCs in accordance with 40 CFR Part 60, Section 60.4211(g)(3). The performance test shall be performed within 10% of peak load or the highest achievable load and shall consist of three (3) separate one-hour (1-hour) runs. For the purposes of determining compliance with the applicable NSPS Subpart IIII not-to-exceed (NTE) requirements listed below, the arithmetic mean of the results from the three (3) runs shall apply.

<u>Pollutant</u>	<u>NTE Requirement</u>
NO _x	68.5 lb/hr
CO	84.3 lb/hr
PM/PM ₁₀	3.97 lb/hr
VOC	9.9 lb/hr

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR §60.4211)¹

2. Performance Test Methods

The performance test shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR Part 60, Subpart IIII or EPA-approved alternative test methods.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR Part 60, Subpart IIII)¹

3. Performance Test Plan

At least **thirty (30) days** prior to performing a test, the permittee shall submit a written performance test plan to the Department of Health and U.S. EPA, Region 9, that includes the date(s) of the test, test duration, test locations, test methods, source operation, and other parameters that may affect test results. Such a plan shall conform to EPA guidelines including quality assurance procedures. A test plan that does not have the approval of the Department of Health may be grounds to invalidate any test and require a retest.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90, 40 CFR §60.8)¹

4. Performance Test Report

Within **sixty (60) days** after completion of the performance test, the permittee shall submit to the Department of Health and U.S. EPA, Region 9, the test report which shall include the operating conditions of the diesel engine generators at the time of the test, the analysis of

the fuel, the summarized test results, comparative results with the NTE standards for each pollutant in accordance with 40 CFR Part 60, Section 60.4212.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90, 40 CFR §60.8, §60.4212)¹

Section G. Agency Notification

Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

¹The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

²The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT II – INSIG: SPECIAL CONDITIONS
INSIGNIFICANT ACTIVITIES
COVERED SOURCE PERMIT NO. 0686-01-C**

Issuance Date:

Expiration Date:

In addition to the Standard Conditions of the Covered Source Permit, the following Special Conditions shall apply to the permitted facility:

Section A. Equipment Description

This attachment encompasses insignificant activities listed in HAR, Section 11-60.1-82(f) and (g) for which provisions of this permit and HAR, Subchapter 2, General Prohibitions, apply.

(Auth.: HAR §11-60.1-3)

Section B. Operational Limitations

1. The permittee shall take measures to operate applicable insignificant activities in accordance with the provisions of HAR, Subchapter 2 for visible emissions, fugitive dust, incineration, process industries, sulfur oxides from fuel combustion, storage of volatile organic compounds, volatile organic compound water separation, pump and compressor requirements, and waste gas disposal.

(Auth.: HAR §11-60.1-3, §11-60.1-82, §11-60.1-90)

2. The Department of Health may at any time require the permittee to further abate emissions if an inspection indicates poor or insufficient controls.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-82, §11-60.1-90)

Section C. Monitoring and Recordkeeping Requirements

1. The Department of Health reserves the right to require monitoring, recordkeeping, or testing of any insignificant activity to determine compliance with the applicable requirements.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. All records shall be maintained for at least five (5) years from the date of any required monitoring, recordkeeping, testing, or reporting. These records shall be true, accurate, and maintained in a permanent form suitable for inspection and made available to the Department of Health or its authorized representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

Section D. Notification and Reporting

Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached **Compliance Certification Form** pursuant to HAR, Section 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

1. The identification of each term or condition of the permit that is the basis of the certification;
2. The compliance status;
3. Whether compliance was continuous or intermittent;
4. The methods used for determining the compliance status of the source currently and over the reporting period;
5. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504(b) of the Clean Air Act;
6. Brief description of any deviations including identifying as possible exceptions to compliance any periods during which compliance is required and in which the excursion or exceedances as defined in 40 CFR 64 occurred; and
7. Any additional information as required by the Department of Health including information to determine compliance.

The compliance certification shall be submitted **within sixty (60) days** after the end of each calendar year, and shall be signed and dated by a responsible official.

Upon written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

In lieu of addressing each emission unit as specified in **Compliance Certification Form**, the permittee may address insignificant activities as a single unit provided compliance is met with all applicable requirements. If compliance is not totally attained, the permittee shall identify the specific insignificant activity and provide the details associated with the noncompliance.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

Section E. Agency Notification

Any document (including reports) required to be submitted by this Covered Source Permit shall be done in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

PROPOSED

ATTACHMENT III: ANNUAL FEE REQUIREMENTS COVERED SOURCE PERMIT NO. 0686-01-C

Issuance Date:

Expiration Date:

The following requirements for the submittal of annual fees are established pursuant to Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control. Should HAR, Chapter 60.1 be revised such that the following requirements are in conflict with the provisions of HAR, Chapter 60.1, the permittee shall comply with the provisions of HAR, Chapter 60.1:

1. Annual fees shall be paid in full:
 - a. Within **sixty (60) days** after the end of each calendar year; and
 - b. Within **thirty (30) days** after the permanent discontinuance of the covered source.
2. The annual fees shall be determined and submitted in accordance with Hawaii Administrative Rules, Chapter 11-60.1, Subchapter 6.
3. The annual emissions data for which the annual fees are based shall accompany the submittal of any annual fees and be submitted on forms furnished by the Department of Health.
4. The annual fees and the emission data shall be mailed to:

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, HI 96814**

PROPOSED

ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS COVERED SOURCE PERMIT NO. 0686-01-C

Issuance Date:

Expiration Date:

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

1. Complete the attached form(s):

Monitoring/Annual Emissions Report Form: Fuel Consumption

2. The reporting period shall be from January 1 to December 31 of each year. All reports shall be submitted to the Department of Health within **sixty (60) days** after the end of each calendar year and shall be mailed to the following address:

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, HI 96814**

3. The permittee shall retain the information submitted, including all emission calculations. These records shall be in a permanent form suitable for inspection, retained for a minimum of five (5) years, and made available to the Department of Health upon request.
4. Any information submitted to the Department of Health without a request for confidentiality shall be considered public record.
5. In accordance with HAR, Section 11-60.1-14, the permittee may request confidential treatment of specific information, including information concerning secret processes or methods of manufacture, by submitting a written request to the Director and clearly identifying the specific information that is to be accorded confidential treatment.

PROPOSED

COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0686-01-C
PAGE 1 OF ____

Issuance Date: _____

Expiration Date: _____

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following certification at least annually, or more frequently as requested by the Department.

(Make Copies of the Compliance Certification Form for Future Use)

For Period: _____ Date: _____

Company/Facility Name: _____

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by Department of Health as public record. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, and any permit issued thereof.

PROPOSED

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0686-01-C
(CONTINUED, PAGE 2 OF ____)**

Issuance Date:

Expiration Date:

The purpose of this form is to evaluate whether or not the facility was in compliance with the permit terms and conditions during the covered period. If there were any deviations to the permit terms and conditions during the covered period, the deviation(s) shall be certified as *intermittent compliance* for the particular permit term(s) or condition(s). Deviations include failure to monitor, record, report, or collect the minimum data required by the permit to show compliance. In the absence of any deviation, the particular permit term(s) or condition(s) may be certified as *continuous compliance*.

Instructions:

Please certify Sections A, B, and C below for continuous or intermittent compliance. Sections A and B are to be certified as a group of permit conditions. Section C shall be certified individually for each operational and emissions limit condition as listed in the Special Conditions section of the permit (list all applicable equipment for each condition). Any deviations shall also be listed individually and described in Section D. The facility may substitute its own generated form in verbatim for Sections C and D.

A. Attachment I, Standard Conditions

<u>Permit term/condition</u>	<u>Equipment(s)</u>	<u>Compliance</u>
All standard conditions	All Equipment(s) listed in the permit	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

B. Special Conditions - Monitoring, Recordkeeping, Reporting, Testing, and INSIG

<u>Permit term/condition</u> All monitoring conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
<u>Permit term/condition</u> All recordkeeping conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
<u>Permit term/condition</u> All reporting conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
<u>Permit term/condition</u> All testing conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
<u>Permit term/condition</u> All INSIG conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

PROPOSED

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0686-01-C
(CONTINUED, PAGE ____ OF ____)**

Issuance Date:

Expiration Date:

C. Special Conditions - Operational and Emissions Limitations

Each permit term/condition shall be identified in chronological order using attachment and section numbers (e.g., Attachment II, B.1, Attachment IIA, Special Condition No. B.1.f, etc.). Each equipment shall be identified using the description stated in Section A of the Special Conditions (e.g., unit no., model no., serial no., etc.). Check all methods (as required by permit) used to determine the compliance status of the respective permit term/condition.

<u>Permit term/condition</u>	<u>Equipment(s)</u>	<u>Method</u>	<u>Compliance</u>
		<input type="checkbox"/> monitoring <input type="checkbox"/> recordkeeping <input type="checkbox"/> reporting <input type="checkbox"/> testing <input type="checkbox"/> none of the above	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		<input type="checkbox"/> monitoring <input type="checkbox"/> recordkeeping <input type="checkbox"/> reporting <input type="checkbox"/> testing <input type="checkbox"/> none of the above	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		<input type="checkbox"/> monitoring <input type="checkbox"/> recordkeeping <input type="checkbox"/> reporting <input type="checkbox"/> testing <input type="checkbox"/> none of the above	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		<input type="checkbox"/> monitoring <input type="checkbox"/> recordkeeping <input type="checkbox"/> reporting <input type="checkbox"/> testing <input type="checkbox"/> none of the above	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		<input type="checkbox"/> monitoring <input type="checkbox"/> recordkeeping <input type="checkbox"/> reporting <input type="checkbox"/> testing <input type="checkbox"/> none of the above	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		<input type="checkbox"/> monitoring <input type="checkbox"/> recordkeeping <input type="checkbox"/> reporting <input type="checkbox"/> testing <input type="checkbox"/> none of the above	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		<input type="checkbox"/> monitoring <input type="checkbox"/> recordkeeping <input type="checkbox"/> reporting <input type="checkbox"/> testing <input type="checkbox"/> none of the above	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

(Make Additional Copies if Needed)

PROPOSED

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0686-01-C
(CONTINUED, PAGE ____ OF ____)**

Issuance Date:

Expiration Date:

D. Deviations

<u>Permit Term/ Condition</u>	<u>Equipment(s) / Brief Summary of Deviation</u>	<u>Deviation Period time (am/pm) & date (mo/day/yr)</u>	<u>Date of Written Deviation Report to DOH (mo/day/yr)</u>
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	

*Identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR 64 occurred.

(Make Additional Copies if Needed)

PROPOSED

**MONITORING/ANNUAL EMISSIONS REPORT FORM
FUEL CONSUMPTION
COVERED SOURCE PERMIT NO. 0686-01-C**

Issuance Date: _____

Expiration Date: _____

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

(Make Copies for Future Use)

For Period: _____ Date: _____

Facility Name: _____

Equipment Location: _____

Equipment Description: _____

Equipment Capacity/Rating (specify units): _____
(Units such as horsepower, kilowatt, tons/hour, etc.)

Serial/ID Nos.: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate, and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

MONTH	TOTAL MONTHLY FUEL CONSUMPTION DEGS NOS. 1 TO 4 (GALLONS)	ROLLING 12-MONTH PERIOD TOTAL FUEL CONSUMPTION DEGS NOS. 1 TO 4 (GALLONS)
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		

TYPE OF FUEL FIRED	MAXIMUM SULFUR CONTENT (% BY WEIGHT)	MINIMUM CETANE INDEX	MAXIMUM AROMATIC CONTENT (VOLUME %)

PROPOSED

**MONITORING REPORT FORM
OPACITY EXCEEDANCES
COVERED SOURCE PERMIT NO. 0686-01-C**

Issuance Date:**Expiration Date:**

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information **semi-annually**:

(Make Copies for Future Use)

For Period: _____ Date: _____

Company/Facility Name: _____

Facility Name: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate, and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature):_____

Visible Emissions:

Report the following on the lines provided below: all date(s) and six (6) minute average opacity reading(s) which the opacity limit was exceeded during the monthly observations; or if there were no exceedances during the monthly observations, then write "no exceedances" in the comment column.

[illegible]

PROPOSED

VISIBLE EMISSIONS FORM REQUIREMENTS STATE OF HAWAII COVERED SOURCE PERMIT NO. 0686-01-C

Issuance Date:

Expiration Date:

The **Visible Emissions (VE) Form** shall be completed **monthly** (*each calendar month*) for each equipment subject to opacity limits in accordance with 40 CFR Part 60, Appendix A, Method 9. At least **annually** (*calendar year*), VE observation shall be conducted for each equipment subject to opacity limits by a certified reader in accordance with Method 9. The VE Form shall be completed as follows:

1. VE observations shall take place during the day only. The opacity shall be noted in five (5) percent increments (e.g., 25%).
2. Orient the sun within a 140 degree sector to your back. Provide a source layout sketch on the VE Form using the symbols as shown.
3. For VE observations of stacks, stand at least three (3) stack heights but not more than a quarter mile from the stack.
4. For VE observations of fugitive emissions from crushing and screening plants, stand at least 4.57 meters (15 feet) from the visible emissions source, but not more than a quarter mile from the visible emission source.
5. Two (2) consecutive six (6) minute observations shall be taken at fifteen (15) second intervals for each stack or emission point.
6. The six (6) minute average opacity reading shall be calculated for each observation.
7. If possible, the observations shall be performed as follows:
 - a. Read from where the line of sight is at right angles to the wind direction.
 - b. The line of sight shall not include more than one (1) plume at a time.
 - c. Read at the point in the plume with the greatest opacity (without condensed water vapor), ideally while the plume is no wider than the stack diameter.
 - d. Read the plume at fifteen (15) second intervals only. Do not read continuously.
 - e. The equipment shall be operating at the maximum permitted capacity.
8. If the equipment was shut-down for that period, briefly explain the reason for shut-down in the comment column.

The permittee shall retain the completed VE Forms for recordkeeping. These records shall be in a permanent form suitable for inspection, retained for a minimum of five (5) years, and made available to the Department of Health, or their representative upon request.

Any required initial and annual performance test performed in accordance with Method 9 by a certified reader shall satisfy the respective equipment's VE monitoring requirements for the month the performance test is performed.

PROPOSED

VISIBLE EMISSIONS FORM COVERED SOURCE PERMIT NO. 0686-01-C

Issuance Date: _____

Expiration Date: _____

(Make Copies for Future Use for Each Stack or Emission Point)

Company Name: _____



For stacks, describe equipment and fuel: _____

For fugitive emissions from crushers and screens, describe:

Fugitive emission point: _____

Plant Production (tons/hr): _____

(During observation)

Stack **X**
Sun 
Wind 

Draw North Arrow

X Emission Point

Observers Position

140

Sun Location Line

Site Conditions:

Emission point or stack height above ground (ft): _____

Emission point or stack distance from observer (ft): _____

Emission color (black or white): _____

Sky conditions (% cloud cover): _____

Wind speed (mph): _____

Temperature (°F): _____

Observer Name: _____

Certified? (Yes/No): _____

Observation Date and Start Time: _____

MINUTES	Seconds				COMMENTS
	0	15	30	45	
1					
2					
3					
4					
5					
6					
Six (6) Minute Average Opacity Reading (%):					

Observation Date and Start Time: _____

MINUTES	Seconds				COMMENTS
	0	15	30	45	
1					
2					
3					
4					
5					
6					
Six (6) Minute Average Opacity Reading (%):					